HEALTH CARE PROVIDER COMMUNICATOR STYLE AND PATIENT COMPREHENSION OF ORAL CONTRACEPTIVE USE

By

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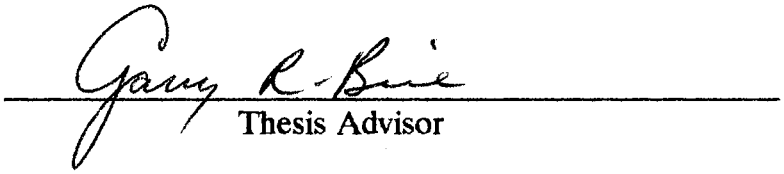

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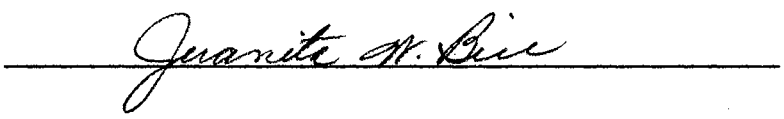

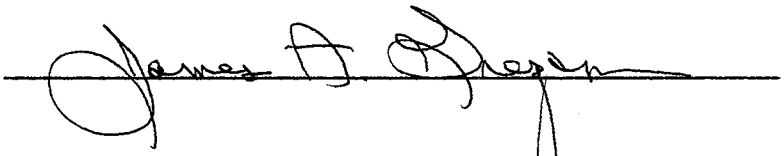

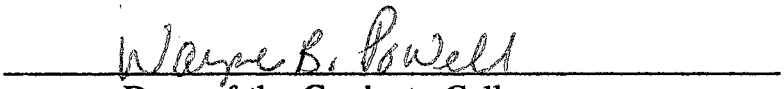

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CHAPTER I

RESEARCH PROBLEM

Introduction

Effective patient education has been shown to alter detrimental lifestyle behaviors, resulting in an improved health status and a subsequent decrease in health care costs. The concept of educated health consumers is an important one in the realm of health promotion, illness prevention, and health maintenance. This perception has been supported by documentation in health research conducted by the Department of Health and Human Services (U.S. Department of Health and Human Services, 1992).

Adolescent women can use a specific type of health care education as it relates to pregnancy prevention. This education involves teaching the adolescent to accurately use the oral contraceptive pill (OCP).

The predominant choice of method to prevent pregnancy by the adolescent population is the OCP (Hatcher, Stewart & Trussell, 1994). Oral contraceptives (OCPs) are one of the most effective forms of reversible contraception and they are widely available. OCPs are among the most prescribed method of contraception for use in a healthy population. In 1988, it was estimated that worldwide about 60 million women were current OCP users (Hatcher, Stewart, &

Trussell, 1994).

Even though OCPs are effective and available for the adolescent population, there are still many adolescents who conceive inadvertently while taking OCPs. OCP users need to know how to take the tablets correctly, what to do if they do not take the OCPs correctly and when the tablets might not be effective (Smith and Whitfield, 1995). The fact that adolescents continue to have unplanned pregnancies while stating that they know where to obtain a prescription for OCPs suggests that: (1) They do not obtain a prescription for OCPs even though they know how to obtain a prescription, (2) that the patient does not understand accurate use OCPs, or is not motivated to take it properly. To be effective in preventing pregnancy, the patients need to know how to take the OCPs correctly, what to do if they do not take the OCP correctly, and when the OCPs might not be effective in preventing pregnancy (Smith and Whitfield, 1995). The impact of health education upon the accurate (correct) use of oral contraceptives by the user has not been established.

In order for the patient to be compliant in her use of OCPs, she must first comprehend how to take the OCPs correctly. Noncompliant OCP users are defined as women who either unintentionally discontinue use and/or do not take OCPs correctly. The patient may discontinue OCPs if adversely affected by factors including side effects, poor cycle control, and fear of serious side effects (International Working Groups, 1992).

By improving compliance and reducing the annual OCP user failure rate by only one percent, 630,000 fewer women in the world would have accidental pregnancies (Hatcher, Stewart, & Russell, 1994). Recent studies indicate that

incorrect use, and discontinuation of OCP by the adolescent user raise the failure rates number of unintended pregnancies) to as high as 18 percent, depending on the demographic profile of the user (Jones, 1989).

A single young woman who becomes pregnant due to OCP failure, and maintains the pregnancy, may also require additional assistance through welfare. This includes the cost of the county health department prenatal visits, the hospital charges for the delivery room, the charge for the physician or the nurse midwife to deliver the newborn, charge for the pediatrician to assess the newborn, charge and for infant car seat to transport the infant to the home. In addition if the mother of the infant is not financially self sufficient after the birth of her infant she will undoubtedly apply for food stamps, housing, and Medicaid, for her and the infant. These costs directly or indirectly affect our society.

Need for the Study

Failure rates related to the incorrect use of OCPs range from 3 to 20 percent for diverse populations in both developed and developing countries (Moreno & Goldman, 1991). In the United States it is estimated that the incorrect usage of OCPs contributing to an unplanned pregnancy, may result in an estimated 2.5 billion dollar expense yearly (Hatcher, Stewart, & Trussell, 1994).

Poor instruction from the OCP prescriber, lack of understanding by the patient, poor recall or lack of motivation could all be tied to OCP failure. Poor (inaccurate) instruction by the OCP prescriber has been studied (Kovacs, 1994). The accuracy of patient comprehension of the effective use of oral contraceptives related to the communicator style of the health care has not been established.

Statement of the Problem

The OCP is an effective and widely available method of contraception for young women. The OCP is routinely used by young women, although the pregnancy rate of unplanned pregnancies for young women continues to escalate.

Purpose of the Study

The purpose of this study is to determine if there is a relationship among: (1) the comprehension of oral contraceptive use by 16 to 45 year old patients requesting prescriptions for the OCPs for the first time at a college health clinic or a county health clinic and (2) the communication style of the health care provider and (3) the length of time the patient and the provider interact.

This study will also assess learner comprehension as a function of communicator style. Lahbrook and Wheeless (1978) offer support for the importance of communicator style in education when they state that a major task, of instructional communication researchers, is to conceptualize clearly the role communication plays in the learning process. They point out that what is needed is a careful evaluation and identification of the communication components which may maximize teaching effectiveness. The accuracy of patient comprehension of effective use of oral contraceptives related to the communication style of the health care provider has not been established.

Research Questions

The following research questions provided guidance to the study:

1. Is there a relationship between the length of time spent by the health care provider with the patient and the patient comprehension level of oral contraceptive use immediately following the appointment?

2. Is there a relationship between comprehension of accurate oral contraceptive use among initial OCP users (patients) and the health care provider communicator style?

Variables

In this study, the dependent variable was patient comprehension of the accurate use of oral contraceptives, as measured by the Oral Contraceptive Comprehension Questionnaire (OCCQ) (Kovacs, 1994). The independent variables were the 11 communicator styles measured by the Communicator Style Measure (Norton, 1978) and the length of the appointment time between the patient and the provider.

Scope and Limitations

This study was limited to first time oral contraceptive users that were seeking a prescription for OCPs. Subjects were limited to those patients who requested OCPs at five selected health centers in the Midwest.

This study was limited to the exploration of patient comprehension of the use of OCPs related to the patient's perception of the health care providers' communication styles.

Assumptions

The following assumptions were made in this study: (1) It was assumed that all respondents of the study had no difficulty understanding the directions presented on the Oral Contraceptive Comprehension Questionnaire (OCCQ) or the Communicator Style Measure (CSM), (2) It was assumed that the respondents completed the OCCQ and the CSM without knowing how other respondents were answering, (3) It was assumed that all subjects were first time OCP users (the patients stated they were), and (4) It was assumed that the respondents were representative of the general population of first time OC users. The respondents requesting OCPs from a health care provider were attending a Midwest college health clinic or a county health clinic.

Definitions

For the purposes of this study, the following terms will be defined as:

Health care provider: The person providing the health care for the patient. The provider could be a registered nurse, a nurse practitioner, a physician's assistant, or a physician.

OCP: Oral contraceptive pill.

OCPs: Oral contraceptive pills.

OCCQ: Oral contraceptive comprehension questionairre (Kovacs, 1994).

CSM: Communication style measure (Norton, 1978).

Patient education: The process of teaching the patient about the health

care concern the patient addressed.

Oral contraceptive failure: The risk of pregnancy occurring while on oral contraceptives, being higher then those estimated by the pharmaceutical company that developed that particular oral contraceptive (Hatcher, Stewart, and Trussell, 1994).

Noncompliance: Noncompliant OC users are defined as women who either unintentionally discontinue use and/or who do not take the OC correctly (International Working Groups, 1992).

Communicator style: The way one verbally and paraverbally interacts to signal how literal meaning is to be taken, interpreted, filtered, or understood in the communicative process (Norton, 1978).

Communicator style dimensions:

1. Impression leaving: The impression leaving communicator tends to be remembered because of the stimuli which are projected. What is said and the way it is said is emphasized.

2. Contentious: The contentious communicator is argumentative. The contentious communicator is challenging and has a reluctance to leave an argument unfinished or unanswered.

3. Open: The open communicator readily reveals personal things about the self, easily expresses feelings and emotions, and tends to be unsecretive, unreserved, and somewhat frank.

4. Dramatic: The dramatic communicator manipulates exaggerations, fantasies, stories, metaphors, rhythm, voice, and other stylistic devices to highlight or understate content.

5. Dominant: The dominant communicator talks frequently, takes charge in a social situation, comes on strong, and controls informal conversations.

6. Precise: The precise communicator tries to be strictly accurate when arguing, prefers well-defined arguments, and likes proof or documentation when arguing.

7. Relaxed: The relaxed communicator is calm and collected, not nervous under pressure, and does not show nervous mannerisms.

8. Friendly: The friendly communicator is encouraging to people, acknowledges the contribution of other people, openly expresses admiration, and tends to be tactful.

9. Animated: The animated communicator provides frequent and sustained eye contact, uses many facial expressions, and gestures often.

10. Attentive: The attentive communicator really likes to listen to the other, shows interest in what the other is saying, and deliberately reacts in such a way that the other knows he or she is being listened to.

11. Communicator image: The person with a good communicator image finds it easy to talk with strangers, to small groups, and with members of the opposite sex (Norton, 1978).

Organization of the Study

Chapter I of this study includes an introduction to the problem, a statement of the problem, a need for the study, the purpose of the study, a definition of terms, the research questions, the scope and limitations of the study, the assumptions underlying the study and the organization of the study.

Chapter II is a review of the related literature that is pertinent to the research problem. This chapter is divided into the following headings: (a) patient education and oral contraceptive use compliance, (b) factors affecting risk of pregnancy on oral contraceptive users, (c) patient compliance and comprehension of oral contraceptive use, (d) patient compliance and comprehension of oral contraceptive use related to teaching effectiveness and communicator style, (e) communicator construct, and (f) summary.

Chapter III outlines the methodology that was utilized in the study. This included a description of the population selected as subjects, the procedures for data collection, the collection of the data, the instrumentation, how validity and reliability of the instruments were determined, and how analysis of the data was derived.

Chapter IV presents the findings of the study relevant to patient comprehension of oral contraceptive use and health care provider communicator style. Chapter V summarizes the study, presents conclusions, and suggests recommendations for additional research for practice.

CHAPTER II

REVIEW OF RELATED LITERATURE

Patient Education and Oral Contraceptive Use Compliance

The impact of health education upon the accurate use of OCPs by the patient has not been established. A review of the literature related to patient education and the accurate use OCPs indicate that there has been minimal research in this specific area. One related research article published on the topic of inaccurate or incorrect use of OCPs assessed 209 unplanned pregnancies, in oral contraceptive users, to determine associated factors (Kovacs, et al, 1989). His research study indicated that classically suggested cofactors for pregnancy in OCP users were: missed pills, late pills, drug interaction, and gastrointestinal upsets.

Factors Affecting Risk of Pregnancy in OC Users

In the United States, patients who discontinue OCPs in the first year of its use are as high as 50 % to 60 %, primarily due to side effects (Cramer and Spiker, 1991). Additional research is needed, but current studies indicate that incorrect use, and discontinuation of OCPs due to side effects are the most common reasons for pregnancies in young women that had been started on OCPs (Kovacs, 1989).

In practice, failure rates from OCPs range from 3% to 20% for diverse populations in both developing and developed countries (Moreno, 1991). Even with 1% annual failure rate, if all patients took OCPs correctly, 10% may become pregnant in ten years, assuming that the failure rate remained stable. At the 6% failure rate 50% may become pregnant within ten years (Ross, 1989). By improving compliance and reducing the annual failure rate by only 1%, 630,000 fewer women in the world would have accidental pregnancies each year (Hatcher, Stewart, and Trussell, 1994).

Pregnancy rates among women under age 20 are considerably higher in the United States than in any other developed country for which data are available, with the exception of Hungary, where the rate is about 5% higher. (Jones, & Forrest et al.) One in eight women in the United States, age 15-19 become pregnant each year. The vast majority of unmarried young women who become pregnant do not intend to do so (Zelnick, Kanter & Ford, 1981).

The noncompliant OCP user does not adhere to the manufacturer's recommended regimen, which is determined in controlled clinical trials to yield the maximum efficacy of the formulation (International Working Group, 1992).

Recommendations for Enhancing Oral Contraceptive Use

The summary of an international working group on enhancing patient compliance and OC efficacy (1992) states that noncompliance with OCPs demands closer attention from physicians. Noncompliance with OCPs puts an increasingly large number of patients at risk for unintended pregnancies each year

and at great financial and emotional cost to the global society.

Patients are turning to less well informed services other than health care providers for information and advice on OCPs. This situation has left the patient with lack of solid information and advice on the current benefit risk profile and widespread misconceptions about the mode of action and correct use of these agents (International Working Group on Enhanced Patient Compliance and Oral Contraceptive Efficacy, 1992).

The reasons cited for adolescents receiving information and advice from persons other then health care providers have been documented by researchers. Kisker (1985) noted that in focus group sessions, teenagers have revealed an intense desire for privacy concerning their own sexual activity and strong feelings of embarrassment when communicating about sexual matters with others: partners, friends, parents, counselors, and physicians (health care providers). Those who had not attended family planning clinics (predominately located in county health departments) pictured these facilities as dingy places for the poor where they would be treated impersonally and viewed as morally irresponsible (Kisker, 1985). Teenagers are also embarrassed to go to family physicians, who might reveal their secrets, offer unwanted moral advice, or simply not help. Their fears are not groundless: 22% of physicians in private general practice (but only 2% of Obstetric-Gynecologists) refuse to serve minors, and 19% of family physicians (18% of Obstetric-Gynecologists) provide contraceptive services only with parental consent (Orr & Forrest, 1985).

Substantial proportions of teenage women surveyed in 1982 reported that they had discussed specific topics (menstrual cycle, how pregnancy occurs,

venereal disease, and contraception) with their parents, and even higher proportions stated that they received formal instruction about these topics in the schools (Dawson, 1986). For example, among those aged 15, 66% and 52% had discussed how pregnancy occurs and contraception, respectively, with their parents, while 81% and 67% had received instruction on these topics in school. At age 18 (when more than half of all never-married women were no longer virgins), the corresponding figures were 67% and 55% with parents and 81% and 74% in the schools (Dawson, 1986).

The International Working Group (1992) suggested that physicians and other health care providers prescribing OCPs take a leadership role, spend more time educating patients about OCPs, more time educating themselves and their peers about OCPs, and select formulas that are associated with the lowest side effects.

Kovacs (1994) wrote in the conclusion of his research that most physicians are unaware of the most appropriate information to give their patients in regard to the appropriate use of OCPs. In addition, they may not ask if the patient is using OCPs when prescribing another medication that may interfere with the effectiveness of their OCPs.

Many researchers agree that patient noncompliance of prescribed OCP use is a major cause of preventable pregnancy. There is much ambiguity as to why the noncompliance occurs. Womens' attitudes toward contraception-how they actually take the OCPs, what they know about how to take them, or what adverse events may affect their taking the OCPs-are important behavioral issues that are becoming increasingly important in clinical practice as physicians and providers

analyze the results of OCP user noncompliance (International Working Group, 1992).

Patient Compliance and Comprehension of Oral Contraceptive Use Related to Teaching Effectiveness and Communicator Style

Patient education and teaching are tools used to assist patients with their understanding of how to accurately use OCPs. Health care provider communication styles which may effect patient education and comprehension can vary greatly form one provider to another depending upon the way the provider feels most comfortable with educating the patient.

The first and one of the most essential steps of effective OCP use is knowing how to take pills correctly (Brook & Smith, 1991). Too often, patients' rely on uninformed, nonmedical sources for advice and information contraception. In one study, the sources of information on side effects were 49 % girlfriends, 51% media, 15% family, and only 3% physicians (Herald & Goodwin, 1980).

Health care providers are generally in the patient educator role when patient's request oral contraceptives for the first time. It is the general expectation that the health care provider will give the patient the information they need to take their oral contraceptive correctly so that it is safe and effective. This consultation includes an exchange of information between the health care provider and the patient. This exchange of information is influenced by the style of communication that the health care provider demonstrates when interacting with the patient.

The styles of communication individuals use have been studied by Norton (1978). He conceptualized communicator style as "the way one verbally and paraverbally interacts to signal how literal meaning should be taken, interpreted, filtered, and understood" (p.99). The communicator style measure (CSM) consists of ten independent variables (dominant, dramatic, contentious, animated, impression leaving, relaxed, attentive, open, and friendly) and one dependent variable (communicator image). The independent variables are descriptive of one's style; the dependent variable is the evaluative consequences of the independent variables (Rubin et al., 1994).

The dominant communicator style reflects a tendency to take charge in social situations. The dramatic communicator style refers to communicating in a way that highlights or understates content. The contentious communicator style represents communicating in a negative combative fashion. The animated communicator style refers to "physical, nonverbal cues".

The impression leaving communicator style defines a person who manifests a visible or memorable style of communicating. The relaxed communicator style refers to an absence of tension or anxiety. The attentive communicator style involves making sure others know that they are being listened to. The open communicator style is "being conversational, expansive, affable, convivial, gregarious, unreserved, unsecretive, somewhat frank, possible outspoken, definitely extroverted, and obviously approachable". The friendly communicator style "ranges in meaning from unhostile to deep intimacy". The precise communicator style refers to correctness and accuracy. The communicator image communicator style refers to whether someone is a "good communicator" (Norton, 1978, 100-110).

The underlying clusters, dimensions, and predictors, of the communicator style construct were investigated in a series of studies. Rather than employ traditional data reduction techniques such as factor analysis, Norton (1978) chose to employ smallest space analysis, which produced two continua. The first continuum was anchored by attentive and friendly (nondirective communication) at one end and by dominant and contentious (directive communication) at the other end. The second was anchored by communicative activity, dramatic and animated...at one end, and by communicative activity, relaxed at the other. Results of multiple regression analysis revealed that three variables (animated, contentious, and dramatic) failed to predict communicator image. The remaining six variables accounted for 53% of the total variance in communicator image. However, Dominant was the best predictor, accounting for over 30% of the variance by itself.

Communicator style is assessed by responding to 41 items using Likert scales that range from strongly agree (1) to strongly disagree (6). The CSM instrument requires less than 10 minutes to complete. Although Norton intended the CSM to be a self report measure, other formats have also been successfully employed (Duran & Zakahi, 1987; Rubin & Feezel, 1986).

Construct validity has been supported by various studies. Communication style has been positively associated with many communication perceptions and behaviors such as communication apprehension (Porter, 1982), attractiveness (Brandt, 1979; Norton & Pettegrew, 1979), relationship disengagement strategies (Hailey et al., 1984), and communication competence (Eadie & Paulson, 1984). Norton (1978) provided evidence of content validity by specifying the domain of

the communicator style construct. Criterion related validity was provided by Duran and Zakahi (1987), who report that the CSM significantly discriminates between satisfied and dissatisfied groups.

The CSM has been employed in a variety of contexts. For example, Buller and Buller (1987) and Buller and Street (1991) found that physician's communicator style has an effect on patient satisfaction. Infante and Gordon (1989) reported that superiors were most satisfied with subordinates who expressed affirming (friendly, relaxed, and attentive) communicator style. In the instructional environment, teachers' communicator style was positively associated with student learning (Nussbaum & Scott, 1979) as well as ratings of teacher effectiveness (Norton, 1983; Scott & Nussbaum, 1981).

The conclusion of the study by Norton (1983) was that teacher effectiveness is strongly related to the communicator style construct. It's structure indicated that effectiveness related to communicator image, attentiveness, impression leaving, relaxed and friendly. In summary, that research provides strong evidence that perceived effectiveness in teaching is inextricably related to one's style of communication. If this is true the quality of teaching can be improved by improving specific communicator behaviors.

Collingsworth, Gould, & Wainwright (1997) reviewed the literature as it pertains to patient education, and patient understanding of self medication. The literature review examined the literature published in the Englis language from 1983 through 1995. These authors concluded from the literature review that: (1) the discussion of patient medication use should be tailored to the individual, (2) more detailed examination of the importance of the health care provider-

patient interaction, to the success of the patient self-medication be evaluated, and (3) researchers need to identify means of improving research designs so that this important field of patient care may in the future be examined with greater rigour.

The Communicator Style Construct

The communication process theory will be the theoretical construct for this study (Watzlawick, Beavin, and Jackson, 1967). The assumptions of the theory are:

1. Two components make up messages. One is the literal or report component, and the other is the command or relational component. The dictionary meaning of the literal component is generally accepted. The command component signals how a message is to be taken, filtered, interpreted, and understood and conditions the relationship between communicators.

2. There are many subsystems to communication. These subsystems include the participant's frame of reference and the standard English definition of words. Individual experiences preferences and values construct the frame of reference. The frame of reference conditions all messages received and sent.

3. Any component of the communication process cannot be evaluated in isolation. An excessive distortion of the interaction could result in conclusions that are inaccurate.

The communicator style construct developed by Norton (1978) consists of 11 style variables which provide a holistic approach to the relational component of a message. Over the past 30 years, researchers have produced an impressive body of research linking the communicative features of medical consultations to various outcomes such as patients' satisfaction with care, understanding of medical

information, adherence to prescribed regimens, and health improvement. Findings of this sort have motivated other scholars and practitioners to conduct in-depth analyses if the content and structure of communication in medical consultations in an effort to explain variation in these patterns of communicative exchange (Street, 1991).

This study will look specifically at communicator style of the health care provider and its possible relationship to patient comprehension of the use of OCPs, after a clinic visit for that purpose.

Patient Comprehension and the Length of the Appointment with the Health Care Provider

The length of time the health care provider (HCP) spends with patient has been documented in the medical literature. Health Maintenance Organizations, now employing many of the nation's physicians, are setting the length of time the physician or health care provider can spend with a patient. They are encouraging the doctors they employee to see a certain number of patients each day. Most patient appointments lasted 7.4 to 8.4 minutes (Wilson, 1989). Wilson (1989) experimented with changing the length of the patient appointment time from 7.5 minutes to 10.0 minutes. The results of the study suggested that with longer appointments there is more discussion of lifestyle factors and more screening activity.

Kaplan et al. (1995) studied patient and visit characteristics related to the physicians' participatory decision-making style. The data indicated the physician

decision making style increased as duration of tenure of the physician-patient relationship increased. Participatory decision-making style also increased with increasing length of office visits. The role of effective interpersonal care in optimizing patients' health outcomes maybe underappreciated.

The literature review in the area of the length of the patient-health care provider interaction consisted of evaluating 189 articles. The studies cited above had the most significance related to this study, however no studies reviewed evaluated patient comprehension of (medications, diagnosis, treatments, etc.) related to the length of the patient visit.

Summary

The review of the literature describes factors affecting the accurate use of the OCPs by adolescent patients. Patient comprehension about accurate OCP use is also reviewed. Integrated into patient comprehension of accurate OCP use, is patient education of Pill use by a health care provider. Patient education is affected by the communicator style of the health care provider. The review of the literature describes eleven identified communicator styles. The impact of health education upon the accurate use of oral contraceptives has not been established.

Research does indicate that incorrect use of the OCP resulted in an estimated 2.5 billion dollar yearly expense in the U.S. alone (Hatcher, Stewart, & Trussel, 1994). Factors effecting the risk of pregnancy in the OCP user are: missing OCPs, late OCPs, unawareness of drug interactions with the OCP that decrease its effectiveness, the OCP user having diarrhea or vomiting during the month of the occurrence of OCP failure (Kovacs, 1989).

By improving compliance (accurate use) of the OCP by OCP users and reducing the annual OCP failure rate by only 1%, 630,000 fewer women in the world would have accidental pregnancies (Hatcher, Stewart, & Trussel, 1994). Noncompliant OCP users are identified as women who either unintentionally discontinue use and/or do not adhere to the manufacturer's recommended regimen, which is determined in controlled clinical trials to yield the maximum efficiency of the formulation (International Working Group, 1992). Noncompliance with using OCPs puts an increasingly large number of patients at risk for unintended pregnancies each year at a great financial and emotional cost to the global society.

Enhanced compliance by the OCP user is described in the review of the literature. The International Working Group on Enhanced Patient Compliance and Oral Contraceptive Efficacy 1992 suggested: 1) that physicians and other health care providers prescribing the OCP take a leadership role in remedying some of these situations, 2) that health care providers spend more time educating themselves and their peers about the OCP, 3) that health care providers spend more time educating patients about side effects and 4) that health care providers select formulas (of the OCP) that are associated with the least amount of side effects. Health care providers agree that there is ambiguity as to why noncompliance by OCP users occur.

Patient education and teaching are tools used by the health care provider to assist patients with their understanding of how to accurately use the OCP. Health care providers are in the patient educator role when patients request the OCP for the first time. The patient expects that the health care provider will give

the patient the information they need to take the OCPs in a safe and effective manner. This interaction between the patient and the provider (referred to as a consultation) includes an exchange of information. During this interaction the health care provider will demonstrate the use of a particular communicator style. Norton (1978) describes eleven different communicator styles, one of which is used by the health care provider during an interaction.

The role of the health care provider as teacher, in a consultation for OCP use is evident, as the patient requests appropriate education about correct use of the OCP. Norton (1983) concluded that teacher effectiveness is strongly related to the communicator style construct. That the research provides strong evidence that the perceived effectiveness in teaching is inextricably related to one's style of communication.

CHAPTER III

METHODOLOGY

The purpose of this research was to investigate the relationship between the Health care provider (HCP) communication style and their patients' comprehension of the accurate use of the Oral Contraceptive Pill (OCP).

Research Design

The one shot case study, post-test only, design was used in this research to investigate the relationship between the HCPs' communication style and their patients' comprehension of the accurate use of the OCP. The evaluation (the data collection) took place immediately after a medical appointment involving the patient's request to start the OCP for the first time.

Two research instruments were used. The instruments assessed: (1) the patient's perception of the communicator style of their HCP: and (2) the patient's comprehension of the accurate use of the OCP. This design was chosen because questionnaires are generally familiar to people and can be easily self administered.

Population and Sample

The patients and HCPs used in the study were from one of four county health clinics or one of three college health clinics in the Midwest. A convenience sample of 50 patients and 10 health care providers at the various clinics, on the days nurse mangers or the researcher could arrange to be at the clinic, composed the sample. The patients utilized in this study were only those requesting the OCP for the first time.

Instrumentation

Two instruments were used in the study to generate the data required for the study: (1) The Oral Contraceptive Comprehension Questionnaire (Kovacs, 1994), and (2) the Communicator Style Measure (Norton, 1978), and questions addressing demographic measures were developed by the author and followed the Oral Comprehension Questionnaire.

Oral Comprehension Questionnaire

The dependent variable for this study was accurate comprehension of oral contraceptive use. Kovacs (1994) developed a check-box questionnaire to determine the advice given to oral contraceptive users by 154 general practitioners to discover how well-informed the practitioners were regarding oral contraceptive use. He made special reference to missed OCPs and drug interactions. His findings indicated that this group of metropolitan general practitioners was generally well informed about the increased risk that the missed OCP, malabsorption or antibiotic interaction causes. His questionnaire contained 16

OCP related questions.

Using that questionnaire as a reference an expert panel consisting of six medical experts was asked to develop a questionnaire to assess comprehension of OCP use. Two of those medical experts were medical doctors, one expert was a physician's assistant, and three experts were nurse practitioners. Those medical experts all had at least ten years of experience in their practice, and all routinely prescribed and discussed the accurate use of oral contraceptives with their patients. The resulting questionnaire was developed by that panel of experts (Appendix A).

Communicator Style Measure

The independent variables for the study were the 11 dimensions of communicator style. The communicator style definition, or construct, consists of 11 style variables which provide a holistic approach to the command, or relational, component of a message. Descriptions and definitions for each of the 11 style variables are provided in Chapter I.

The Communicator Style Measure was modified for use in this study by: (1) changing the word "person" wherever it appeared in the questionnaire to "health care provider", (2) deleting items in the questionnaire that were not applicable to this setting (these were items 8, 13, 14, 24, 31, 32, 33, 43) and (3) modifying the Likert Scale from a 6-point to a 5-point scale, to enable the use of a coding form).

Reliability and validity for the communicator style measure have been demonstrated by two primary lines of research. One line of research studied four of the eleven variables in detail. The four variables include: dramatic, open,

(Norton, 1977, 1978, 1982, 1983), relaxed, and attentive, (Emery, Norton, & Plain, 1980; Norton & Pettegrew, 1979). Norton (1978) reported the following internal reliabilities for the CSM variables: friendly, .37; animated, .56; attentive, .57; contentious, .65; dramatic, ,68; impression leaving, 69; open, .69; relaxed, .71; communicator image, .72; and dominant, .82.

A second line of research establishing reliability and validity for Norton's communicator style construct focused on relationships between communicator style and interpersonal components and perceptual processes. The following topics relating to validity and reliability of communicator style have received attention in established research journals: (1) teacher effectiveness (Norton, 1977; Norton & Nussbaum, 1980; Norton and Holladay, 1983), (2) dyadic perception of communicator style (Norton & Miller, 1975; Miller, 1977; Miller, 1980), (3) personnel selection interview (Norton & Bednar, 1979; Norton & Robison, 1980), sex differences and similarities in communicator style (Montgomery & Norton, 1981), and (4) impact of communicator style in therapeutic relations (Pettegrew, 1977).

Demographic Factors

Demographic questions were attached to the Oral Contraceptive Comprehension Questionnaire (OOCQ). These questions were used to obtain information pertaining to personal variables from the respondents in this study (Appendix C). They were also used to obtain information pertaining to personal variables from the HCPs as well.

The questions for the respondents were designed to provide personal

demographic information relating to the following variables: age, ethnicity, number of times the respondent has seen the specific HCP, and length of time spent with the provider during the consultation requesting oral contraceptives for the first time.

The demographic questions for the HCP were designed to provide personal demographic information relating to the following variables: age, number of years of experience as a health care provider, highest educational degree, and number of years (or months) as a HCP in their current area of employment.

Both demographic questionnaires were field tested on six cohorts not included in the sample. The cohort consisted of one physicians' assistant, three nurse practitioners, and two physicians. The cohorts were asked to complete the questionnaire and critiques its appropriateness, face validity, length, and ease of response. Their suggestions were incorporated into the final instrument and focused on decreasing the original number of demographic questions so that the HCP would find it quick and simple to complete (Appendix B).

Data Collection

Clinic managers at three Midwestern college health clinics, and clinic mangers at four Midwestern county health departments were contacted in February 1998, about this study and were asked to consider allowing voluntary participation by their patients and their Health care provider (HCP). These managers were selected as they regularly participate on the internet in the Student Health List Serve group and seem agreeable to participation in educational activities. They were sent a copy of the Oklahoma States University's

Investigational Review Board (Appendix D) decision for exempt status for the study, to use as a template if they also needed permission for data collection from their Investigational Review Board. The nurse managers of these clinics acted as the liaisons in this study. They were not involved in patient education and would not bias the study.

The researcher prepared packets of materials for each patient participant in the study. Each packet consisted of the OCCQ, the Communicator Style Measure (CSM), and a cover letter (Appendix E) explaining the study and providing instructions for mailing the materials to the researcher in the enclosed postage paid, addressed envelope. The researcher also prepared packets of materials for each HCP in the study. These packets consisted of the OCCQ and a cover letter (Appendix F). Clinic managers were asked to return all completed packets to the researcher by April 2, 1998. All clinic managers contacted agreed to participate in the study. The patient participants responded to two instruments. The first instrument was the OCCQ, and the second instrument, was the CSM. This measure was modified appropriately for the medical setting. Health care provider participants responded to one instrument, the OCCQ.

Analysis of Data

A stepwise multiple regression (Williams, 1992) analysis was constructed to assess the extent to which the 11 communicator styles and time spent with the patient (length of the appointment) predicted comprehension by the patient of the accurate use of the OCP. This form of analysis was chosen because of the nature of the study. The data from the results of the instruments were both interval

data. Since there were 11 independent variables, and one dependent variable, stepwise multiple regression analysis was the most appropriate analysis to use (Table III, page 36).

CHAPTER IV

PRESENTATION OF FINDINGS AND ANALYSIS OF DATA

The purpose of this study was to explore the relationship of health care provider's communicator style with their patient's comprehension of the accurate use of the OCP. Data were collected from first time OCP users during the month of March, 1998. The convenience sample of 10 health care providers and 50 patients was from six Midwest health care clinics.

Clinic managers at three Midwestern college health clinics, and clinic mangers at four Midwestern county health departments were contacted in February 1998, about this study and were asked to consider allowing voluntary participation by their patients and their providers. They were sent a copy of the Oklahoma States University's Investigational Research Board (IRB) decision for exempt status for the study, to use as a template if they also needed permission for data collection from their IRB. The nurse managers of these clinics acted as the liaisons in this study. The managers were not involved in patient education and would not bias study. The researcher prepared packets of materials for each patient participant in the study. Each packets consisted of the OCCQ, the CSM, and a cover letter (Appendix E) explaining the study and providing instructions

for mailing the materials to the researcher in the enclosed postage paid, addressed envelope.

The researcher also prepared packets of materials for each health care provider in the study. These packets consisted of the Oral Contraceptive Comprehension Questionnaire (OCCQ) and a cover letter (Appendix F). Clinic managers were asked to return all completed packets to the researcher by April 2, 1998. All clinic managers contacted agreed to participate in the study.

The patient participants responded to two instruments. The first instrument was the OCCQ, the second instrument, was the Communication Style Measure (CSM). This measure was modified appropriately for the medical setting. Health care provider participants responded to one instrument, the OCCQ. Forty-six (46) of the 50 patient questionnaires were included in the analysis. For of the questionnaires were eliminated because the respondents did not complete both questionnaires they only completed the OCCQ but not the CSM. Ten (10) of the health care provider questionnaires (OCCQ) were included in the analysis. These questionnaires were used as the key to the correct responses to the OCCQ for that provider's patients.

Demographic Data

Data collected to describe the patient population included age, ethnicity, number of times the patient had seen the particular provider for other needs, and the patient's determination of the length of time the health care provider spent with the patient. The range of the age of the patient responders was 16-45 years old. The mean age of the patient responders was 22.17 years old, with a standard

deviation of 5.59. The ethnicity of the patients was as follows: 43 of the 46 respondents were Caucasian, 2 of the 46 respondents were Hispanic, and 1 of the 46 respondents was African America. The number of times the patient had seen the particular provider was as follows: 27 of the 46 respondents had seen the provider for the first time, 6 of the 46 respondents had seen the provider for the second time, 7 of the respondents had seen the provider for the third time, 3 of the respondents had seen the provider for the fourth time and 3 of the respondents had seen the provider for the fifth time.

The length of time the provider spent with the patient ranged from 5 to 75 minutes. The mean time spent was 23.91 minutes with a standard deviation of 16.76 (see Table I, below).

TABLE I

DEMOGRAPHIC DATA OF PARTICIPANTS

Variables	Range	Mean	Standard Deviation
Age	16-45	22.17	5.59
Number of previous interactions with the health care provider	1-5	1.96	1.60
Length of time spent with health care provider (in minutes)	5-75	23.91	16.76

* r=.17, p=.26

The demographic data used to describe the health care provider was ethnicity, gender, age, number of years as a health care provider, number of years (or months) as a health care provider at their current clinic, type of provider status (i.e. nurse practitioner, physician, or physician's assistant), and highest level of educational degree obtained. All health care providers were Caucasian and all were female. The average age of the health care providers was 40.9 years old with a range of 37-55 and a standard deviation of 7.39. The number of months as a health care provider averaged 123.5 with a range of 4 months to 360 months. The average number of months worked at the current clinic averaged 75, with a range of 4 months to 240 months, and a standard deviation of 6.69 (see Table II, below).

TABLE II

DEMOGRAPHIC DATA OF THE HEALTH CARE PROVIDERS

Variables	Range	Mean	Standard Deviations
Age	37-55	40.9	7.39
Months in profession	4-360	123.5	110.8
Months at current postion	4-240	75	6.69

Analysis of the Data

Analysis of the first research question: Is there a relationship between the length of interaction between the health care provider and the patient and the comprehension level of oral contraceptive use immedicately following the appointment?

The time spent with the provider was not a significant predictor of the number of correct responses to the OCCQ, r=.17 and p=.26 (see Table I, page 31).

Analysis of the second research question: Is there a relationship between comprehension of the accurate use of oral contraceptives among intial (first time) oral contraceptive user patients) and the health care provider communication style. Patient participants responded to 15 questions regarding the accurate use of the OCP. Each respondent's answers to the OCCQ were scored using their health care provider's responses to the items as a key (0= incorrect, 1=correct). All health care providers responded correctly to all 15 test items.

Patient participants mean OCCQ test score was 13.35 (SD 1.23, range 10-15). At least 90% of the respondents answered 10 of the OCCQ test items correctly, 73.9% gave correct responses to item 3 (vomiting could decrease the effectiveness of the pill), 76% gave correct responses to item 4 (if I miss three or more pills, I should use another method of contraception until I get my period and then restart the pill with a new cycle), 76% gave correct responses to item 7 (Nausea, breast tenderness, and menstrual spotting are not side effects of the pill), 85% provided the correct response to item 8 (serious, but rare side effects of the

pill include stroke and blood clots in the lungs or legs and 78% gave the correct response to item 13 (birth control pills may cause infertility). The other test items were answered correctly at least 95% of the time.

A step-wise multiple regression using the dimensions of communicator style and time spent with the provider as independent variables, and the number of correct responses to the OCCQ as the dependent variable was performed to address the research question.

The analysis revealed that four of the independent variables met criterion limits ($p < .05$), for entry into the regression equation these variables--the communicator image dimension, the attentive dimension, the friendly dimension and the dramatic dimension--accounted for 39.6% of the variance to the number of correct responses on the OCCQ. A summary of the regression analysis is presented (see Table III, page 36). The reliability estimate using chronbachs alpha coefficient was .88.

In summary, the communicator image dimension and the dramatic dimension were negative predictors to the number of correct responses on the OCCQ, while the attentive dimension and the friendly dimension were positive predictors (see Table III, page 36).

TABLE III

MULTIPLE STEPWISE REGRESSION RESULTS
PREDICTING PATIENT COMPREHENSION
FROM COMMUNICATOR STYLE VARIABLES

Variable(s) Entered on Step Number

1.. COMMUNICATOR IMAGE

Multiple R	.30570
R Square	.09345
Adjusted R Square	.07285
Standard Error	1.18743

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	6.39557	6.39557
Residual	44	62.03922	1.40998

F = 4.53592 Signif F = .0388

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
IMAGE	-.862745	.405088	-.305704	-2.130	.0388
(Constant)	17.333333	1.879504		9.222	.0000

---------- Variables not in the Equation ----------

Variable	Beta In	Partial	Min Toler	T	Sig T
IMPRESS	.237792	.218075	.762447	1.465	.1501
CONTENT	-.119147	-.124488	.989644	-.823	.4152
OPEN	-.155283	-.157856	.936836	-1.048	.3004
DRAMATIC	-.172238	-.180834	.999297	-1.206	.2345
DOMINANT	-.196722	-.206150	.995523	-1.381	.1743
PRECISE	.093156	.091472	.874063	.602	.5501
RELAXED	.054976	.048221	.697448	.317	.7531
FRIENDLY	.433288	.342711	.567141	2.392	.0212
ATTNTIVE	.481724	.389148	.591594	2.770	.0082
ANIMATED	.183003	.182249	.899089	1.215	.2308

TABLE III (continued)

Variable(s) Entered on Step Number

2.. ATTENTIVE

Multiple R	.48035
R Square	.23074
Adjusted R Square	.19496
Standard Error	1.10647

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	15.79056	7.89528
Residual	43	52.64422	1.22428

F = 6.44889 Signif F = .0036

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
IMAGE	-1.731556	.490763	-.613557	-3.528	.0010
ATTNTIVE	1.264234	.456373	.481724	2.770	.0082
(Constant)	15.980739	1.818159		8.790	.0000

---------- Variables not in the Equation ----------

Variable	Beta In	Partial	Min Toler	T	Sig T
IMPRESS	.243153	.242054	.496596	1.617	.1134
CONTENT	.078743	-.088760	.584293	-.578	.5667
OPEN	-.162212	-.178981	.571343	-1.179	.2450
DRAMATIC	-.197871	-.225020	.588956	-1.497	.1420
DOMINANT	-.239260	-.270614	.584802	-1.822	.0756
PRECISE	-.120903	-.113608	.459727	-.741	.4628
RELAXED	.003866	.003657	.497169	.024	.9812
FRIENDLY	.354357	.299005	.449057	2.031	.0487
ANIMATED	.118893	.126592	.573849	.827	.4129

TABLE III (continued)

Variable(s) Entered on Step Number

3.. FRIENDLY

Multiple R	.54728
R Square	.29951
Adjusted R Square	.24948
Standard Error	1.06835

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	3	20.49718	6.83239
Residual	42	47.93761	1.14137

F = 5.98612 Signif F = .0017

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
IMAGE	-2.273680	.543883	-.805653	-4.180	.0001
ATTNTIVE	1.095684	.448398	.417499	2.444	.0188
FRIENDLY	.857919	.422479	.354357	2.031	.0487
(Constant)	15.568367	1.767220		8.810	.0000

---------- Variables not in the Equation ----------

Variable	Beta In	Partial	Min Toler	T	Sig T
IMPRESS	.128450	.117503	.421148	.758	.4530
CONTENT	-.053851	-.063319	.448325	-.406	.6867
OPEN	-.238254	-.267911	.447887	-1.781	.0824
DRAMATIC	-.333841	-.371766	.430456	-2.564	.0141
DOMINANT	-.183646	-.210426	.443237	-1.378	.1756
PRECISE	-.177179	-.172160	.445412	-1.119	.2696
RELAXED	-.122539	-.113690	.428125	-.733	.4679
ANIMATED	.043266	.046323	.449025	.297	.7680

TABLE III (Continued)

Variable(s) Entered on Step Number

4.. DRAMATIC

Multiple R	.62955
R Square	.39633
Adjusted R Square	.33743
Standard Error	1.00380

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	4	27.12262	6.78065
Residual	41	41.31217	1.00761

F = 6.72942 Signif F = .0003

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
IMAGE	-2.546076	.521946	-.902173	-4.878	.0000
ATTNTIVE	1.095510	.421306	.417433	2.600	.0129
FRIENDLY	1.245836	.424802	.514583	2.933	.0055
DRAMATIC	-.506424	.197494	-.333841	-2.564	.0141
(Constant)	16.550280	1.704026		9.712	.0000

---------- Variables not in the Equation ----------

Variable	Beta In	Partial	Min Toler	T	Sig T
IMPRESS	.243365	.232418	.401265	1.511	.1386
CONTENT	.164017	.175040	.417370	1.124	.2675
OPEN	-.106635	-.114075	.419081	-.726	.4719
DOMINANT	-.075747	-.087103	.411044	-.553	.5833
PRECISE	-.190962	-.199753	.426539	-1.289	.2047
RELAXED	-.080606	-.080097	.407080	-.508	.6141
ANIMATED	.097168	.110817	.430243	.705	.4848

End Block Number 1 PIN = .050 Limits reached.

TABLE III (Continued)

Equation Number 1 Dependent Variable.. CORRECT

---------- Variables in the Equation ----------

Variable	B	SE B	95% Confdnce Intrvl B		Beta
IMAGE	-2.546076	.521946	-3.600166	-1.491987	-.902173
ATTNTIVE	1.095510	.421306	.244668	1.946353	.417433
FRIENDLY	1.245836	.424802	.387931	2.103740	.514583
DRAMATIC	-.506424	.197494	-.905270	-.107577	-.333841
(Constant)	16.550280	1.704026	13.108936	19.991624	

---------- Variables in the Equation ----------

Variable	SE Beta	Correl	Part Cor	Partial	Tolerance	VIF	F
IMAGE	.184946	-.305704	-.591908	-.606002	.430456	2.323	23.795
ATTNTIVE	.160534	.089620	.315521	.376254	.571323	1.750	6.761
FRIENDLY	.175462	.044607	.355863	.416417	.478248	2.091	8.601
DRAMATIC	.130191	-.180223	-.311149	-.371766	.868677	1.151	6.575
(Constant)	94.332						

------ in -------

Variable	Sig F
IMAGE	.0000
ATTNTIVE	.0129
FRIENDLY	.0055
DRAMATIC	.0141
(Constant)	.0000

---------- Variables not in the Equation ----------

Variable	Beta In	Partial	Tolerance	VIF	Min Toler	F	Sig F
IMPRESS	.243365	.232418	.550586	1.816	.401265	2.284	.1386
CONTENT	.164017	.175040	.687539	1.454	.417370	1.264	.2675
OPEN	-.106635	-.114075	.690841	1.448	.419081	.527	.4719
DOMINANT	-.075747	-.087103	.798238	1.253	.411044	.306	.5833
PRECISE	-.190962	-.199753	.660533	1.514	.426539	1.662	.2047
RELAXED	-.080606	-.080097	.596076	1.678	.407080	.258	.6141
ANIMATED	.097168	.110817	.785168	1.274	.430243	.497	.4848

TABLE III (Continued)

Summary Table

Step	MultR	Rsq	F(Eqn)	SigF		Variable	BetaIn
1	.3057	.0935	4.536	.039	In:	IMAGE	-.3057
2	.4804	.2307	6.449	.004	In:	ATTNTIVE	.4817
3	.5473	.2995	5.986	.002	In:	FRIENDLY	.3544
4	.6295	.3963	6.729	.000	In:	DRAMATIC	-.3338

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The problem is that pregnancy rates for young women continue to escalate even though OCPs are widely available and prescribed. Up to 18% of patients taking oral contraceptive pills may not be taking them accurately resulting in an unplanned pregnancy.

There is much information that identifies areas of educational needs for patients taking OCPs for the first time. The researcher was unsuccessful in identifying literature documenting variables that contribute to patient comprehension of OCP use. The purpose of this study was to explore the relationship between first time OCP users comprehension of the accurate use of OCPs and the communicator style of the health care provider.

Conclusions

The study sought to answer the following research questions:

1. Is there a relationship between the length of time spent by the health care provider with the patient and the patient comprehension level of oral contraceptive use immediately following the appointment?

2. Is there a relationship between comprehension of accurate oral contraceptive use among initial pill users (patients) and the health care provider communicator style?

Related to research question number one; there is no significant relationship between the length of time spent with the health care provider and the patient comprehension of oral contraceptive use ($r=.17$, $p=.26$).

Related to research question number two: as a result of the findings in this study the conclusions that can be drawn and can be useful in both the college health clinic and the county health clinics relating to patients requesting oral contraceptives. Patients that are requesting the OCP for the first time, demonstrate a greater understanding of oral contraceptive use on post testing when their health care provider uses a friendly and attentive communicator style. The friendly communicator (Norton, 1978; 1983) is encouraging to people, acknowledges the contributions of other people, openly expresses admiration, and tries to be tactful.

Patients requesting the OCP for the first time, also demonstrated greater understanding in the accurate use of the OCP on post testing if their health care provider was an attentive communicator. The attentive communicator (Norton, 1978; 1983) really likes to listen to the other, shows an interest in what the other is saying, and deliberately reacts in such a way that the other knows he or she is being listened to, by the communicator.

Patients requesting the OCP for the first time, demonstrated a limited understanding of the accurate use of OCPs if their health care provider had a dramatic communicator style. The dramatic communicator (Norton, 1978; 1983)

manipulates exaggerations. fantasies, stories, metaphors, rhythm, voice, and other stylistic devices to highlight or understate content.

New OCP users also demonstrated a limited understanding of OCP use if their health care provider used the communicator image style. The communicator image style (Norton, 1978; 1983) finds it easy to talk with strangers, to small groups and to members of the opposite sex.

Recommendations

Based upon the findings of this study the following recommendations are suggested:

1. Further research should be obtained relating to patient comprehension and length of the visit between the patient and the provider. The literature review indicated that research in this area is sparse. This research study demonstrated that there was no significant difference in the length of the visit and patient comprehension of the accurate use of OCPs.

2. Power analysis indicated that a larger sample size would be advantageous in order to identify other significant relationships between the variables in the study. It is recommended that a similar study should undertaken using a larger participant sample size.

3. The study was limited to patients and health care providers in five Midwestern health clinics. A similar study should be made among patients and health care providers of other clinics in different geographic areas.

4. All health care providers were Caucasian and they were all female. A A similar study should be made among male health care providers and health care providers of varying ethnicity that prescribe OCPs for first time OCP users. (This population may be difficult to find, since most first time OCP users schedule their appointments at funded health clinics which are staffed predominately by nurse practitioners who are predominately female and Caucasian).

5. The Communicator Style Measure has been suggested to represent self report measures of behavior, which is memory based and not a true indicator of actual behavior. This measure should continue to seek more rigorous validation.

Discussion

The friendly and attentive communicator styles are less ego involved than the communicator image and the dramatic communicator styles. It has been this researcher's experience that adolescents already feel in a "one down" position of power when talking to health care providers. By decreasing the evident one up position of the health care provider by incorporating the attentive and friendly communicator style into the patient interaction the patient will feel more comfortable. This increased level of comfort may make the patient feel more empowered to ask questions, or generally increase the amount of discussion to verify the patient's comprehension of the accurate use of OCPs.

Health care professionals may want to understand more about communication style so, that they can possibly effect a change in their presentation during an interaction. Although personality itself is usually enduring, the communicator style may have the possibility of being altered some, with

adequate education. Managers of health care clinics may want to incorporate the use of the Communication Style Measure by having the interviewers take the measure regarding their impressions of the applicants style. The managers my want to avoid hiring those providers that do not have at least a friendly and attentive style.

It seems that the communicator image would have a positive effect on the patients when they have an interaction with the provider. The negative predictor of this dimension should be investigated further. This study reflects similar findings related to teaching effectiveness and communicator style. The one discrepancy was that the dramatic style is a positive predicator in teaching effectiveness but a negative predictor in the health care interaction. This could be related to the patients taking a serious perspective of understanding the use of oral contraceptives, and the dramatic style may be to distracting for this setting.

The teaching effectiveness related to the components of the communicator styles of friendly and attentive allow for reciprocity to occur in the interaction between the patient and the provider. This form of teaching effectiveness is closely tied to the elements of teaching styles that are reflected in the literature by the adult educator, John Dewey.

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APPENDIXES

APPENDIX A

PARTICIPANT COVER LETTER

Participant Information

I am a nurse practitioner working on my dissertation for my doctoral degree. Your willingness to participate in this survey is greatly appreciated. This study addresses communication styles. You will be asked to complete two surveys after your appointment with you health care provider.

The surveys will take approximately five minutes each to complete. You will remain anonymous (you do not need to put your name on the survey). The results of this study will be available to you at the completion of the study, at your request.

Your responses to the study will remain confidential until the time that the data are shredded. You may contact (me) Betsy Schrader at (405) 744-7047 if you have questions about this study.

THANKYOU !!

APPENDIX B

ORAL CONTRACEPTIVE COMPREHENSION

QUESTIONNAIRE FOR THE PARTICIPANT

Provider Number_____

Comprehension Inventory
Please answer the following questions
by circling
T=true or F=false

Please answer the following questions about oral contraceptive use. Circle the correct response.

t f 1. Missing a pill could decrease the effectiveness of the pill?
t f 2. If I miss a pill I should take it as soon as remember that it was missed?
t f 3. Vomiting could decrease the effectiveness of the pill?
t f 4. If I miss three or more pills, I should use another method of contraception until I get my period and then restart the pill with a new cycle?
t f 5. If I take certain antibiotics while I'm on the pill they may decrease the effectiveness of the pill?
t f 6. You were given written information (i.e. pamphlet or brochure) about the pill to have for future reference?
t f 7. Nausea, breast tenderness, and menstrual spotting are not side effects of the pill?
t f 8. Serious, but rare side effects of the pill include stroke and blood clots in the lungs or legs?
t f 9. Birth control pills can regulate my period?
t f 10. Birth control pills prevent sexually transmitted diseases?
t f 11. Birth control pills may cause a small amount of weight gain, on average three pounds?
t f 12. Birth control pills may not prevent pregnancy if they are not taken as directed?
t f 13. Birth control pills may cause infertility?
t f 14. If I have side effects of the pill that are bothersome but not serious I may consult my health care provider about changing to a different type of birth control pill?
t f 15. Birth control pills should be taken consistently at the same time everyday?

APPENDIX C

DEMOGRAPHIC DATA FOR

THE PARTICIPANT

Demographic Questions

Please respond to the following questions, by writing your response on this form.

1. My age is:
2. My ethnicity is:
3. I have seen this health care provider_____ number of times. (If this is the first time you have seen this health care provider, write "one", if more than one time please note approximate number of times (for example, you have seen this health care provider at least three times-write in 3).
4. This provider was ____ female ____ male.
5. The actual amount of time spent with the direct health care provider was: ____ number of minutes. (If this provider spent a total of 15 minutes altogether with you, write 15, etc).

APPENDIX D

COMMUNICATOR STYLE MEASURE OF THE HEALTH CARE PROVIDER FOR THE PATIENT PARTICIPANT

Communicator Style Measure

Using the scale presented below ...
A= Strongly Disagree
B= Disagree
C= Neither Agree or Disagree
D= Agree
E= Strongly Agree
Note: HCP= Health Care Provider

Please respond to each of the statements by writing the appropriate letter in the blank on the left.

____1. When this HCP communicates, he or she tends to be very encouraging to people.
____2. This HCP finds it very easy to communicate on a one to one basis.
____3. This HCP deliberately reacts in such a way that patients know he or she is listening to them.
____4. In discussions this HCP insists upon very precise definitions.
____5. This HCP actively uses a lot of facial expressions when he or she communicates.
____6. This HCP is an extremely attentive communicator.
____7. This HCP leaves patients with an impression of him or her they definitely tend to remember.
____8. This HCP does not have nervous mannerisms in his or her speech.
____9. This HCP readily expresses admiration for others.
____10. This HCP tends to constantly gesture when he or she communicates.
____11. This HCP is a very precise communicator.
____12. Under pressure this HCP comes across as a relaxed speaker.
____13. Once this HCP gets wound up in a heated discussion, he or she has a hard time stopping.
____14. This HCP tells patients about himself or herself even if (s)he does not know them well.
____15. This HCP tries to take charge of things when he or she is with a patient.
____16. This HCP's eyes reflect exactly what he or she is feeling when the HCP communicates.

Communicator Style Measure (continued)

____17. This HCP tells jokes, anecdotes, and stories when he or she communicates.
____18. This HCP really likes to listen very carefully to his or her patients.
____19. This HCP is an extremely friendly communicator.
____20. This HCP likes to be strictly accurate when (s)he communicates.
____21. This HCP dramatizes a lot.
____22. This HCP physically and vocally acts out what (s)he wants to communicate.
____23. To be friendly, this HCP habitually acknowledges verbally their patient's contributions.
____24. When this HCP disagrees with a patient (s)he is very quick to challenge them.
____25. This HCP readily reveals personal things about him (her) self.
____26. The rhythm of flow of this HCP's speech is not affected by nervousness.
____27. This HCP very frequently verbally exaggerates to emphasize a point.
____28. This HCP could repeat back what to a patient exactly what was said meant.
____29. This HCP is a very good communicator.
____30. This HCP is an extremely open communicator.
____31. What this HCP says usually leaves an impression on people.
____32. This HCP is very argumentative.
____33. This HCP leaves a definite impression on patients.
____34. This HCP openly expresses feelings and emotions.
____35. This HCP is a very relaxed communicator.
____36. The way this HCP says something usually leaves an impression on patients.

APPENDIX E

COVER LETTER FOR THE HEALTH CARE PROVIDER PARTICIPANT

Participant Information
for the Health Care Provider

I am a nurse practitioner working on my dissertation for my doctoral degree. Your willingness to participate in this study is greatly appreciated. This study addresses communication styles. You will be asked to complete a survey at the end of the month which will be collected by the clinic manager. The survey will remain anonymous. Your patients will be completeing two surveys after their appointment with you, if they meet the criteria for the study. The clinic manager will take care of this portion of the study.

The survey will take approximately five minutes each to complete. You will remain anonymous (you do not need to put your name on the survey). The results of this study will be available to you at the completion of the study, at your request.

Your responses to the study will remain confidential until the time that the data are shredded. You may contact (me) Betsy Schrader at (405) 744-7047 if you have questions about this study. THANK YOU !!

APPENDIX F

ORAL CONTRACEPTIVE COMPREHENSION QUESTIONNAIRE FOR THE HEALTH CARE PROVIDER

Provider Number_____
Comprehension Inventory
Please answer the following questions
by circling
t=true
or
f=false

Please answer the following questions as if you were one of the patients that you instruct about oral contraceptive use. Circle the correct response.

t f 1. Missing a pill could decrease the effectiveness of the pill?
t f 2. If I miss a pill I should take it as soon as remember that it was missed?
t f 3. Vomiting could decrease the effectiveness of the pill?
t f 4. If I miss three or more pills, I should use another method of contraception until I get my period and then restart the pill with a new cycle?
t f 5. If I take certain antibiotics while I'm on the pill they may decrease the effectiveness of the pill?
t f 6. You were given written information (i.e. pamphlet or brochure) about the pill to have for future reference?
t f 7. Nausea, breast tenderness, and menstrual spotting are not side effects of the pill?
t f 8. Serious, but rare side effects of the pill include stroke and blood clots in the lungs or legs?
t f 9. Birth control pills can regulate my period?
t f 10. Birth control pills prevent sexually transmitted diseases?
t f 11. Birth control pills may cause a small amount of weight gain, on average three pounds?
t f 12. Birth control pills may not prevent pregnancy if they are not taken as directed?
t f 13. Birth control pills may cause infertility?
t f 14. If I have side effects of the pill that are bothersome but not serious I may consult my health care provider about changing to a different type of birth control pill?
t f 15. Birth control pills should be taken consistently at the same time everyday?

APPENDIX G

DEMOGRAPHIC DATA FOR THE HEALTH CARE PROVIDER

DEMOGRAPHIC DATA FOR THE HEALTH CARE PROVIDER

1. Please enter number of years as a Health Care Provider: _____ .

2. Please enter the number of years in this position: _____ .

3. Please identify your gender, male of female: _____ .

4. Please note your credentials (i.e., L.P.N. R.N., N.P., M.D., etc):_____ .

5. Please note your age: _____.

6. Please note your ethnicity: _____.

Thank you very much for your assistance with this project!!

APPENDIX H

INSTITUTIONAL REVIEW BOARD

APPROVAL

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 12-15-97 **IRB#:** ED-98-041

Proposal Title: THE EFFECT OF HEALTH CARE PROVIDER COMMUNICATOR STYLE ON PATIENT COMPREHENSION OF ORAL CONTRACEPTIVE USE

Principal Investigator(s): Garry Bice, Elizabeth Babler-Schrader

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING, AS WELL AS ARE SUBJECT TO MONITORING AT ANY TIME DURING THE APPROVAL PERIOD.
APPROVAL STATUS PERIOD VALID FOR DATA COLLECTION FOR A ONE CALENDAR YEAR PERIOD AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Disapproval are as follows:

Signature: _____ Date: December 15, 1997

Chair of Institutional Review Board

cc: Elizabeth Babler-Schrader

Elizabeth Louise Babler-Schrader

Candidate for the Degree of

Doctor of Education

Thesis: HEALTH CARE PROVIDER COMMUNICATOR STYLE AND PATIENT COMPREHENSION OF ORAL CONTRACEPTIVE USE

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Bioloxi, Mississippi, March 11, 1956, the daughter of Richard H. and Shirley A. Babler.

Education: Graduated from Edwardsburg Senior High School, Edwardsburg, Michigan, 1974; received Associate of Science degree in Nursing from Southwestern Michigan Community College in Dowagiac, Michigan, in June 1978; received Bachelor of Science degree in Nursing from Bethel College in Mishawaka, Indiana, in 1986; received Master of Science degree in Nursing from Indiana University in Indianapolis, Indiana in May, 1989; completed requirements for the Doctor of Education degree at Oklahoma State University in July, 1998.

Professional Experience: Nurse Educator, University of Michigan Medical Center, Ann Arbor, Michigan, June 1980 to June 1983; Assistant Head Nurse, Memorial Hospital, South Bend, Indiana June 1983 to June 1986; Acute Care Nurse, Indiana University Student Health Center, Bloomington, Indiana, June 1986 to June 1989; Adult Nurse Practitioner, Indiana University Student Health

Center, June 1989 to June 1992; Community Education Coordinator, Stillwater Medical Center, Stillwater, Oklahoma, June 1992 to June 1995; Adult Nurse Practitoner, Oklahoma State University Student Health Center, Stillwater, Oklahoma, 1995 to present.